Progress Energy

Serial: NPD-NRC-2009-052
April 1, 2009

10CFR52.79

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

**LEVY NUCLEAR POWER PLANT, UNITS 1 AND 2**
**DOCKETS NOS. 52-029 AND 52-030**
**RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION LETTER NO. 011**
**RELATED TO DISPROPORTIONATE NUMBER OF CALM WINDS**

Reference: Letter from Brian Anderson (NRC) to Garry Miller (PEC), dated March 3, 2009, "Request for Additional Information Letter No. 011 Related to SRP Section 2.3.2 for the Levy Nuclear Power Plant, Units 1 and 2 Combined License Application"

Ladies and Gentlemen:

Progress Energy Florida, Inc. (PEF) hereby submits our response to the Nuclear Regulatory Commission's (NRC) request for additional information provided in the referenced letter.

A response to the NRC request is addressed in the enclosure. The enclosure also identifies changes that will be needed in a future revision of the Levy Nuclear Power Plant, Units 1 and 2 application.

If you have any further questions, or need additional information, please contact Bob Kitchen at (919) 546-6992, or me at (919) 546-6107.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on April 1, 2009.

Sincerely,

Garry D. Miller
General Manager
Nuclear Plant Development

Enclosure

cc : U.S. NRC Director, Office of New Reactors/NRLPO
U.S. NRC Office of Nuclear Reactor Regulation/NRLPO
U.S. NRC Region II, Regional Administrator
Mr. Brian Anderson, U.S. NRC Project Manager

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**Levy Nuclear Power Plant, Units 1 and 2**
**Response to NRC Request for Additional Information Letter No. 011 Related to SRP Section 2.3.2 for the Levy Nuclear Power Plant, Units 1 and 2 Combined License Application, Dated March 3, 2009**

| NRC RAI # | Progress Energy RAI # | Progress Energy Response |
|---|---|---|
| 02.03.02-1 | L-0030 | Response enclosed – see following pages |

**NRC Letter No.:** LNP-RAI-LTR-011

**NRC Letter Date:** March 3, 2009

**NRC Review of Final Safety Analysis Report**

**NRC RAI NUMBER:** 02.03.02-1

**Text of NRC RAI:**

Regulatory Guide 1.206, Section C.I.2.3.2.1, "Normal and Extreme Values of Meteorological Parameters," states that "The applicant should fully document and substantiate that this information validly represents conditions at or near the site."

FSAR Table 2.3.2-208 shows that the total number of calm wind observations at the lower (10-meter) wind level is 1615, which is 18.8% of the total observations reported during the period of February 1, 2007 through January 31, 2008. Please discuss in FSAR Section 2.3.2.1.1, "Wind Summaries," the possible causes for what the staff considers to be a disproportionate number of calm winds.

**PGN RAI ID #:** L-0030

**PGN Response to NRC RAI**

While the information in FSAR Table 2.3.2-208 indicates a high frequency of calm winds at the 10-meter level on the tower (i.e., 18.8 percent of the total observations), very few observations of true "calm" winds were recorded at the site. The number of "Calm Hours" that are indicated in Table 2.3.2-208 is representative of the number of hours that the recorded wind speed was less than the manufacturer's stated sensitivity threshold for the instrument. For the Levy instrumentation, the sensitivity threshold is 0.4 meter/second (m/s) (0.9 miles/hour [mph]), and represents the speed below which the manufacturer does not provide a calibration for the instrument. Based on a review of the raw met data, it was concluded that wind speeds below this threshold were rarely "calm," rather they were merely light winds that were less than the manufacturer's stated threshold. This conclusion is based on a review of the raw meteorological data, which indicated that nearly all of the reported "calm" winds at the lower wind speed sensor were in the range of "greater than 0" to less than 0.4 m/s (0.9 mph). Additionally, wind directions associated with these measurements do not reflect the characteristics of calm wind conditions in that the directions are not highly variable or abruptly changing, as would be expected during true calm conditions. Also, the 60-meter winds during the same period (FSAR Table 2.3.2-228) indicate that winds at that level are nearly free of light or calm winds, which is inconsistent with what would be expected during calm (stagnant) conditions. Based on these observations, Progress Energy believes that the very low wind speeds observed at the 10-meter level are attributable to the height of the surrounding forest canopy, and its corresponding influence on wind speeds at the 10-meter elevation. Generally, wind speeds at the 10-meter level can be expected to be lower at this site than would otherwise be observed in a clear open area free of forestation due to surface frictional effects. Given that the entire site is forested similar to the area that surrounds the meteorological tower, the onsite meteorological measurements (including the high frequency of light winds at the 10-meter level) are considered to be both valid and representative of the conditions at the project site.

Additional discussion of this issue will be provided in FSAR Subsection 2.3.2.1.1 in a future amendment to the FSAR.

**Associated HAR COL Application Revisions:**

The following text will be added to the second paragraph of FSAR Subsection 2.3.2.1.1 "Wind Summaries":

"It is noted that the information in Tables 2.3.2-208 indicates a high frequency of 'calm' winds at the 10-meter level (i.e., 18.8 percent of the total observations). A review of the hourly meteorological data indicated that, during the 1-year period of record, nearly all of the observed winds at the 10-meter level were observed to be in the range of 'greater than 0' to less than 0.4 meters per second (m/s) (0.9 mph). Wind directions associated with these measurements do not reflect the characteristics of calm wind conditions in that the directions are not highly variable or abruptly changing, as would be expected during true calm (stagnant) conditions. The very low wind speeds observed at the 10-meter level are believed to be attributable to the height of the surrounding forest canopy and its corresponding frictional influence on wind speeds at the 10-meter elevation."

The following text will be added to the end of the second paragraph of ER Subsection 2.7.4.1.1 "Wind Summaries":

"It is noted that the information in Tables 2.7-9 through 2.7-28 indicates a high frequency of 'calm' winds at the 10-meter level (i.e., 18.8 percent of the total observations in Table 2.7-16). A review of the meteorological data indicates that, during the 1-year period of record, nearly all of the observed winds at the 10-meter level were observed to be in the range of 'greater than 0' to less than 0.4 meters per second (m/s) (0.9 mph). Wind directions associated with these measurements do not reflect the characteristics of calm wind conditions in that the directions are not highly variable or abruptly changing, as would be expected during true calm (stagnant) conditions. The very low wind speeds observed at the 10-meter level are believed to be attributable to the height of the surrounding forest canopy and its corresponding frictional influence on wind speeds at the 10-meter elevation."

**Attachments:**

None